

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
31 August 2000 (31.08.2000)

PCT

(10) International Publication Number  
**WO 00/50048 A3**

(51) International Patent Classification<sup>7</sup>: A61K 35/28,  
35/407, A61P 1/16, 1/18 // C12N 5/06, 5/08

(74) Agents: SEIDE, Rochelle, K. et al.; Baker Botts LLP, 30  
Rockefeller Plaza, New York, NY 10112-0228 (US).

(21) International Application Number: PCT/US00/04744

(81) Designated States (*national*): AE, AL, AM, AT, AU, AZ,  
BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK,  
DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL,  
IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU,  
LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT,  
RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA,  
UG, US, UZ, VN, YU, ZA, ZW.

(22) International Filing Date: 25 February 2000 (25.02.2000)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
60/122,250 26 February 1999 (26.02.1999) US

(84) Designated States (*regional*): ARIPO patent (GH, GM,  
KE, LS, MW, SD, SL, SZ, TZ, UG, ZW), Eurasian patent  
(AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent  
(AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU,  
MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM,  
GA, GN, GW, ML, MR, NE, SN, TD, TG).

(71) Applicant (*for all designated States except US*): UNI-  
VERSITY OF PITTSBURGH OF THE COMMON-  
WEALTH SYSTEM OF HIGHER EDUCATION  
[US/US]; 200 Gardner Steel Conference Center, Pitts-  
burgh, PA 15260 (US).

Published:  
— With international search report.

(72) Inventors; and

(75) Inventors/Applicants (*for US only*): PETERSEN,  
Bryon, E. [US/US]; 243 Willow Drive, Monroeville, PA  
15146 (US). GOFF, Julie, P. [US/US]; 7531 Tuscarora  
Street, Pittsburgh, PA 15208 (US).

(88) Date of publication of the international search report:  
1 February 2001

*For two-letter codes and other abbreviations, refer to the "Guid-  
ance Notes on Codes and Abbreviations" appearing at the begin-  
ning of each regular issue of the PCT Gazette.*

(54) Title: BONE MARROW TRANSPLANTATION FOR HEPATIC REGENERATION AND REPAIR

(57) Abstract: The present invention relates to methods and compositions for stimulating liver regeneration in subjects with liver disorders. Specifically, the methods and compositions of the invention provide for the transplantation of bone marrow cells into a recipient host in amounts sufficient to result in the production of hepatocytes, bile ductal cells and oval cells during liver regeneration. The invention is based in the observation that bone-marrow derived cells, can participate in the production of hepatocytes, bile ductal cells and oval cells during liver regeneration. The present invention further provides methods for deriving enriched populations of hepatic oval cells, considered to be hepatic stem cells, utilizing antibodies that recognizes the Thy-1 cell surface antigen expressed on the surface of hepatic oval cells. The enriched populations of hepatic oval cells can be transplanted into a host for stimulating liver regeneration in subjects with liver disorders.

WO 00/50048 A3

